Appln. No.: 10/659,478

Amendment Dated March 11, 2005

Reply to Office Action of December 15, 2004

Amendment to the Abstract:

The Abstract has been amended. A revised Abstract is attached.

ABSTRACT

A delivery system for endoluminal deployment of a stent inside of a biocompatible graft cover minimizes obstruction of endoluminal fluid flow during deployment. The delivery system comprises includes a stent sheath, a compressed stent underlying the stent sheath, and a graft overlying the stent sheath and releasably retained in a compressed state surrounding the sheath. The graft distal end is attached to the stent at or proximal the stent distal end, and the graft outer surface is exposed to the interior space of the lumen during deployment. The proximal end of the graft may be attached to the stent sheath by a releasable attachment adapted for release during deployment of the stent, or may be otherwise constrained, such as by heat deformation, to remain adjacent the outer circumference of the stent prior to deployment. The releasable attachment may be a suture that is severed by a pusher having a cutter therein. The delivery system may further include an inner core underlying the stent and connected to a tip sheath that overlies the stent distal end. One method of deploying the stent and overlying graft comprises includes advancing the tip sheath to allow the stent distal end to expand, retracting the stent sheath to cause the suture to be severed by the pusher cutter therefore allowing endoluminal fluid to flow between the graft and the sheath, and then completing deployment of the stent to urge the graft against the lumen wall.

Attachment